REMARKS:

In the Office Action dated February 14, 2006, claims 39-48, in the above-identified U.S. patent application were rejected. Reconsideration of the rejections is respectfully requested in view of the above amendments and the following remarks. Claims 40-45 and 47-48 remain in this application and claims 1-39, and 46 have been canceled.

Claims 39-43 and 45-48 were rejected under 35 USC §112, first paragraph, as lacking an adequate written description regarding "G protein mediated extracellular signal transduction pathway". In addition to the disclosure pointed out in applicant's last response, applicants respectfully point out original claim 1 which contains the language "G protein mediated signal transduction". Original claim 3 (which refers back to claim 1) refers to an "extracellular signal pathway". Thus, the current claim language is supported by a combination of originally filed claims 1 and 3. This wording is also supported by the disclosure on page 2, lines 7 to 10, where it is unambiguously disclosed that the growth factor receptor is activated via its extracellular domain and thus via an extracellular mechanism. It is shown on page 10, lines 25-32 that the GPCR ligand bound activation of the growth factor receptor does not comprise the intracellular domain. For this reason, a chimeric receptor, which contains the extracellular domain of EGFR and the intracellular domain of the PDGFR, has been activated in RAT1 cells by adding GPCR ligands. A complete PDGF receptor (extra-/intracellular domain) is in this cell type, however, not activated by adding GPCR ligands. Obviously, the intracellular domain of the PDGF receptor is not

sufficient for the GPCR ligand bound one according to the invention. One skilled in the art would conclude that the activation has to take place extracellularly, otherwise both receptor types, i.e. chimeric and complete receptor, would be activated by the addition of GPCR ligands (see also Figure Ib and Id and page 11, lines 2-16). This correlation is confirmed in the present invention by the Examples described on page 11, lines 26-32 and page 12, lines 1-13. It is disclosed therein that the activation of a GPCR bound signal pathway in a cell induces the activation of a growth factor receptor at a second cell, which is in the immediate proximity (Figure 2a). Thus, this is an intercellular and inevitably also an extracellular signal pathway from one cell to the other. Applicants point out that that the exact language used in the claims does not need to appear in the specification. MPEP §2163.02 states that the "subject matter of the claim need not be described literally (i.e. using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement". MPEP §2163.07(a) indicates that if a disclosed device inherently performs a function or has a property, the patent application discloses that function or property even if it says nothing explicit concerning it and the application may later be amended to recite the function without introducing new matter. The Board of Patent Appeals and Interferences also interpreted the written description requirement in Ex parte Holt, 19 USPQ2d 1211 (Bd Pat App & Inter, 1991) and in Ex parte Eggleston, et al, Appeal No. 2003-2074. In Holt the claims were directed to a component having a channel. The Examiner rejected the claims as lacking adequate support for the channel. The Board held that the figures illustrate a channel in accordance with the common and accepted meaning of the term. The Board stated that "It is well established that the

invention claimed need not be described ipsis verbis in the specification in order to satisfy the disclosure requirements of 35 U.S.C. §112". In Eggleston, the claims were directed to a method of forwarding messages between a host system and a mobile client. The Examiner contended that an explicit limitation in the claims was not present in the written description. The Board stated that explicit disclosure of the claimed term is not required under 35 U.S.C. §112, first paragraph.

Regarding claims 46 and 48, pages 16 and 17 in the present application discuss human prostate cancer cells and page 3, line 26 indicates that ovarian tumors can be treated. In view of the above discussion, applicants contend that the present claims do not include new matter and request that this rejection be withdrawn.

Claims 39, 40, 42-45 and 47 were rejected under 35 USC §102(a) as anticipated by Dong. Applicants respectfully point out that independent claim 47, whose subject-matter is a direct binding of the modulator to the growth factor precursor, does not appear to have been considered in the office action. The office action erroneously states on page 9, second paragraph, that the currently pending claims do not comprise a compound for direct binding of the modulator to the growth factor precursor inhibiting processing of the precursor. Claims 40-43 have been amended to depend from claim 47. Disclosure for a specific compound which directly binds to a growth factor precursor can be found on page 3, line 15 of the present application. As discussed in applicant's prior response, in the presently claimed method, the modulator binds directly to the growth factor receptor. In contrast to the present invention, Dong uses batimastat which inhibits the metallo-

proteinase. Thus, the present invention inhibits receptor tyrosine kinase transactivation by a different mechanism. In view of the fact that Dong does not disclose a compound which binds to a growth factor precursor in a G protein mediated extracellular signal transduction pathway wherein said G protein mediated extracellular signal transduction pathway includes cleavage of a growth factor precursor, applicants contend that Dong does not anticipate the present invention and request that this rejection be withdrawn.

Claim 41 was rejected under 35 USC §103(a) as unpatentable over Dong in view of Miyoshi. Miyoshi was cited for the disclosure of a cell line which produces proHB-EGF and contains EGFR. Miyoshi does not suggest or disclose contacting the cell with a compound which binds to a growth factor precursor in a G protein mediated extracellular signal transduction pathway wherein said G protein mediated extracellular signal transduction pathway includes cleavage of a growth factor precursor, or a step of stimulating the G protein/GPCR initiated signal transduction pathway as required in the first step of the present claims followed by a second step of contacting a cell with a compound affecting a G protein mediated extracellular signal transduction pathway and thus does not cure the above discussed deficiencies in Dong. In view of the above discussion and amendments, applicants request that this rejection be withdrawn.

Claims 46 and 48 were rejected under 35 USC §103(a) as unpatentabe over Dong in view of Sherwood. Sherwood is cited for the disclosure that prostate cancer cells have a high expression of EGF receptors. Applicants respectfully contend that one skilled in the art would not have been motivated to combine Dong and

Sherwood to arrive at the present invention and that Sherwood does not cure the above discussed deficiencies in Dong. Sherwood discloses only that prostate cancer cells have a high expression of EGF receptors. Sherwood does not suggest or disclose contacting the cell with a compound which binds to a growth factor precursor in a G protein mediated extracellular signal transduction pathway wherein said G protein mediated extracellular signal transduction pathway includes cleavage of a growth factor precursor, or a step of stimulating the G protein/GPCR initiated signal transduction pathway as required in the first step of the present claims followed by a second step of contacting a cell with a compound affecting a G protein mediated extracellular signal transduction pathway and thus does not cure the above discussed deficiencies in Dong. In view of the above discussion and amendments, applicants request that this rejection be withdrawn.

Applicants respectfully submit that all of claims 40-45 and 47-48 are now in condition for allowance. If it is believed that the application is not in condition for allowance, it is respectfully requested that the undersigned attorney be contacted at the telephone number below.

In the event this paper is not considered to be timely filed, the Applicant respectfully petitions for an appropriate extension of time. Any fee for such an extension together with any additional fees that may be due with respect to this paper, may be charged to Counsel's Deposit Account No. 02-2135.

Respectfully submitted,

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